THE MAIN GEOLOGICAL FORMATIONS OF CYPRUS AND THEIR GEOTECHNICAL CHARACTERISTICS AND SIGNIFICANCE

Project Report Submitted by

ELENI GEORGIOU AND

PARASKEVI ORFANIDOU

in part satisfaction of the award of Diploma of Technician Engineer in Civil Engineering of the Higher Technical Institute, Cyprus.

Project Supervisor: D. Hadjiadamou Lecturer in Civil Engineering H. T. I.

External Assessor:

Mr. G. Petrides of the Land Geological Department of Cyprus

Type of Project:

Individual



Group



924

Ref. No. C/371. June, 1985

ABSTRACT

The scope of this project is to give genelar information about the main Geological Formations of our Country and also their engineering significance.

First we will deal with the characteristics and distribution of the Igneous and Sedimentary formations which are the two distinct rock formations found in Cyprus.

More emphasis will be given to their Geotechnical properties and their Engineering Significance. CONTENTS

1

		Page
	ACKNOWLEDGEMENTS	
	TITLE, OBJECTIVES, TERMS OF	en en la compañía de
	REFERENCE	
	κ.	
	ABSTRACT	· _
1.0	INTRODUCTION	1
1.1	General Geology and Topography	1-6
2.0	GEOLOGICAL FORMATIONS AND UNITS	7
2.1	Troodos Ophiolite	7-8 - 10 - 10 - 10
2.1.1	Volcanic Series	<u>9-11</u>
2.1.2	Sheeted Intrusive Complex	12-15
2.1.3	The Troodos Plutonic Complex	16-20
2.2.	Sedimentary Rocks	21-22
2.2.1	Permian to Lower Cretaceous Sediments	23
2.2.2	Campanian to Mastrichian Sediments	24-28
2.2.4	Middle to Upper Miocene Sediments	29-31
2:2.5	Pliocene Sediments	32-34
C		
2.3.	Mamonia Complex	35
2.4	Superficial Deposits	36-39
3.0	GEOTECHNICAL PROPERTIES OF THE FORMATION	
	IN CYPRUS AND THEIR ENGINEERING SIGNIFICANCE	
3.1	Introduction	40
3.2	Troodos Ophiolite	41-43
z z	Sadimontany Rocks	44
3.3	Sedimentary Rocks	44
3.3.1	Limestone Group	64 64

3.3.2	Terra and Koronia Limestones	44-46
3.3.3	Clay Formations	47-48
3.3.4	Lefkara Group and Pakhna Formation	48-49
3.3.5	Kythrea Formation	49-50
3.3.6	Pliocene Sediments	50-54
3.4	Mamonia Complex	55-56
3.5	Superficial Deposits	57
3.5.1	Fanglomerates	57
3.5.2	Rivers Terrace Deposits	57
3.5.3	Alluvial Deposits	57-58
3.5.4	Marine Deposits	58-60
3.5.5	Talus Deposits	60
3.5.6	Havara and Kafkala	60-61
4.0	CONCLUSIONS	62-64
4.1	Methods that could be used for facing various geotechnical problems	64-65